

Computer Science 20

Teacher: Mr. Birrell

Room

Content

Problem Solving

- Apply various problem-solving strategies to solving programming problems

Fundamentals of Programming

- Implement variables of different data types
- Investigate how control structures affect the order in which instructions execute
- Construct and utilize functions to encapsulate reusable pieces of code
- Use common coding techniques to enhance code elegance and troubleshoot errors
- Investigate applications of one-dimensional arrays

Computing and Society

- Explore the underlying technology of the Internet
- Examine the evolution of computing machinery and impacts on society
- Investigate computer security practices and privacy implications
- Explore computer science related career paths

Capstone Coding Project

- Develop a coding project of the student's choice

Evaluation

Semester Work:	50%
Exams:	30%
Final Project:	20%

Helpful Things to Have

- Something to write with
- Something to write on
- Scientific Calculator
- Memory Stick
- A working brain

Expectations

- 1) Come to class prepared.
- 2) Do daily assignments all the time.
- 3) Hand in all assignments on time.
- 4) Complete review assignments.
- 5) Eat food outside of the classroom rather than inside.
- 6) Treat the school computers better than you treat your own.

Late Admittance

If the door is open you are permitted to quietly enter the room and find your seat. If the door is closed knock **once** and wait for the teacher to open the door.

Missed Evaluations

Any missed evaluations are expected to be completed the day the student returns.

Unexcused absences will result in a mark of zero for any work due or completed on that day.

Resources

Class wiki: <http://mrbirrell.wikispaces.com/>

Textbook: Program Arcade Games with Python and Pygame <http://programarcadegames.com/>

Course Finalization

There will be no formal comprehensive written final exam in this class. Students will be expected to produce a programming project that will reflect their level of programming expertise at the end of the course.

Acceptable Use Policy

School computers are for School related work only. This applies to ALL times of the day (including lunch). Any blatant offence (even the first offence) will result in the withdrawal of computer privileges. A letter will be sent to your parents. It must be signed and returned to the office before computer privileges will be returned.

Here are some guidelines to help understand the policy:

1. Streaming audio:
 - a. The AUP states that the computers are not to be used as a personal music player.
 - b. If you need to find music on the Internet, ask for permission first.
 - c. Best practice: Bring your own personal player and earphones.
2. Streaming video:
 - a. The AUP prohibits any unauthorized streaming video. This places the largest demand on our network resources.
 - b. Ask permission before watching any streaming video.
 - c. Best practice: After getting permission, use earphones so you don't infringe upon others.
3. Games:
 - a. Unless assigned by a teacher, games are prohibited.
 - b. This will be the most obvious example of a blatant AUP violation.
 - c. Best practice: Save your game playing for home.
4. Personal use:
 - a. The AUP is very clear about not using school computers for personal use.
 - b. Personal use usually includes:
 - i. Checking e-mail messages.
 - ii. Facebook / Twitter
 - iii. Personal interests (cars, bathing suits, shoes, jokes, cats)